Joint Project 66 Phase 1 Replacement Air Defence Targets

Australian Government

Department of Defence

Capability Development Group

Project Manager

Squadron Leader David Riddel

Requirement

- Address a shortfall in ADF air target capability
- Introduce a new aerial target system
- Provide an effective qualification, T&E, and training capability for the ADF

Capability Development Need

- Current ADF aerial target capabilities:
  - Are not representative of the forecast threat.
  - Cannot perform the profiles required to provide qualification, T&E, or realistic and effective operational training.

Current Capability

- Business Jet Towed Targets
  - airspeed limitations
  - weapon safety template encroachment to tug
- JP7 MQM-107E ‘Kalkara’ (1998)
  - limited endurance (with tow)
  - land launched only
  - airspeed and acceleration limitations (with tow)
  - sea-state recovery limitations
  - EOL 2008~2011

Project Status

- Defence Capability Plan 2004 - 2014
- Year of Decision FY 2007/08
- In Service Delivery 2008 - 2010
- EOL 2020
- ***Proposed*** *Defence Capability Committee Apr 2006 (First Pass)*
- ***Proposed*** *Government Approval Nov 2007 (Second Pass)*
- *Guidance - $15 - 22.5m USD*
  - *mission systems, and*
  - *introduction to service*

Project Status - Current Work

- User Requirements - Endorsed
- Operational Concept Document
- Initial Business Cases
- Acquisition Strategy - under development

- Solicitation Documents late 2006

Option Possibilities

- Off the shelf
- ‘Australianised’ off the shelf
- A full spectrum, ‘needs’ specific developed solution

- ADF ownership or lease?
- Paid for service - turnkey?
- Combinations and Permutations….

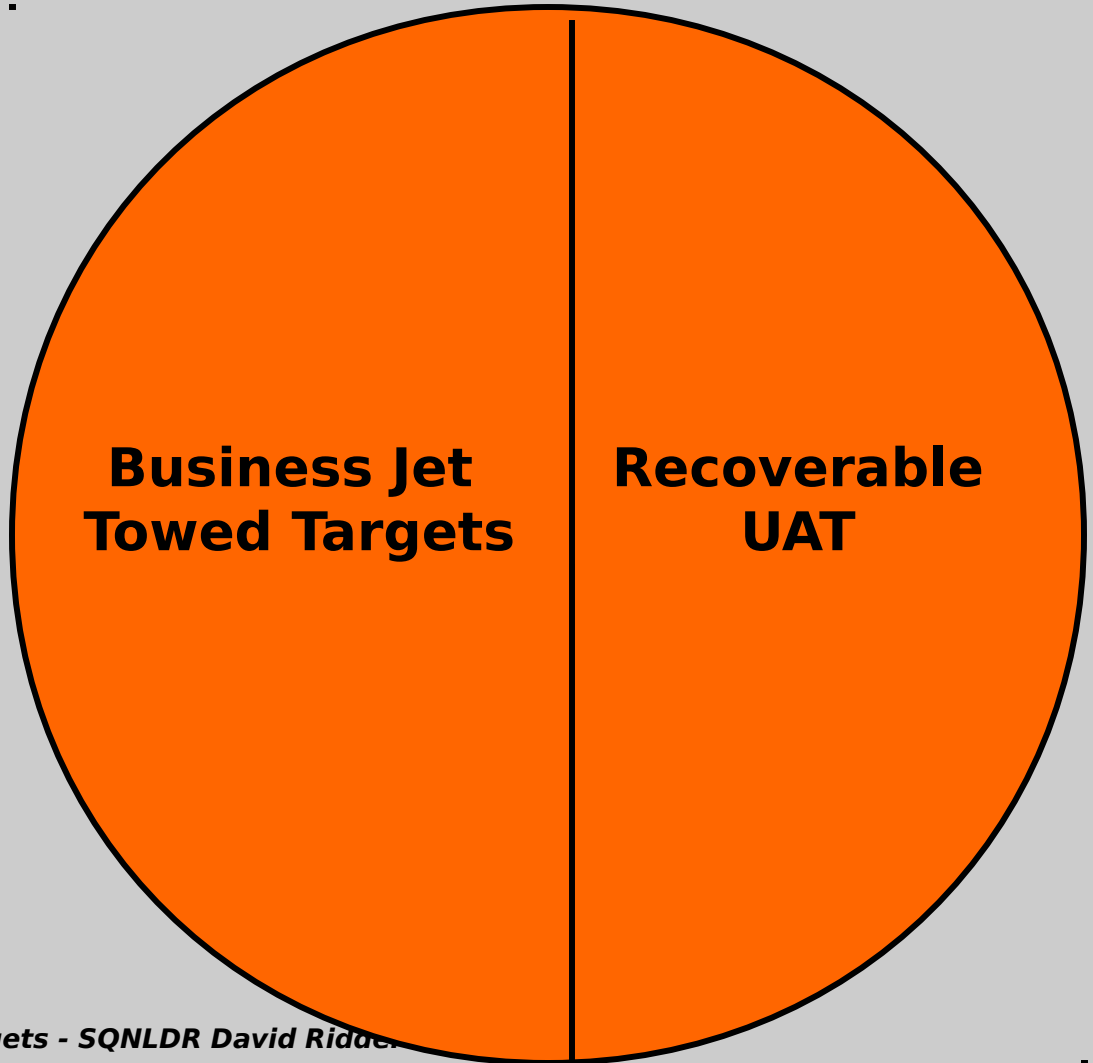
Threats

- Helicopters
- Tactical UAVs
- Fourth Gen Fighters
- Subsonic Sea Skimming Missiles
- Supersonic Sea Skimming Missiles
- Ballistic Missiles

ADF Air Defence Weapon Systems

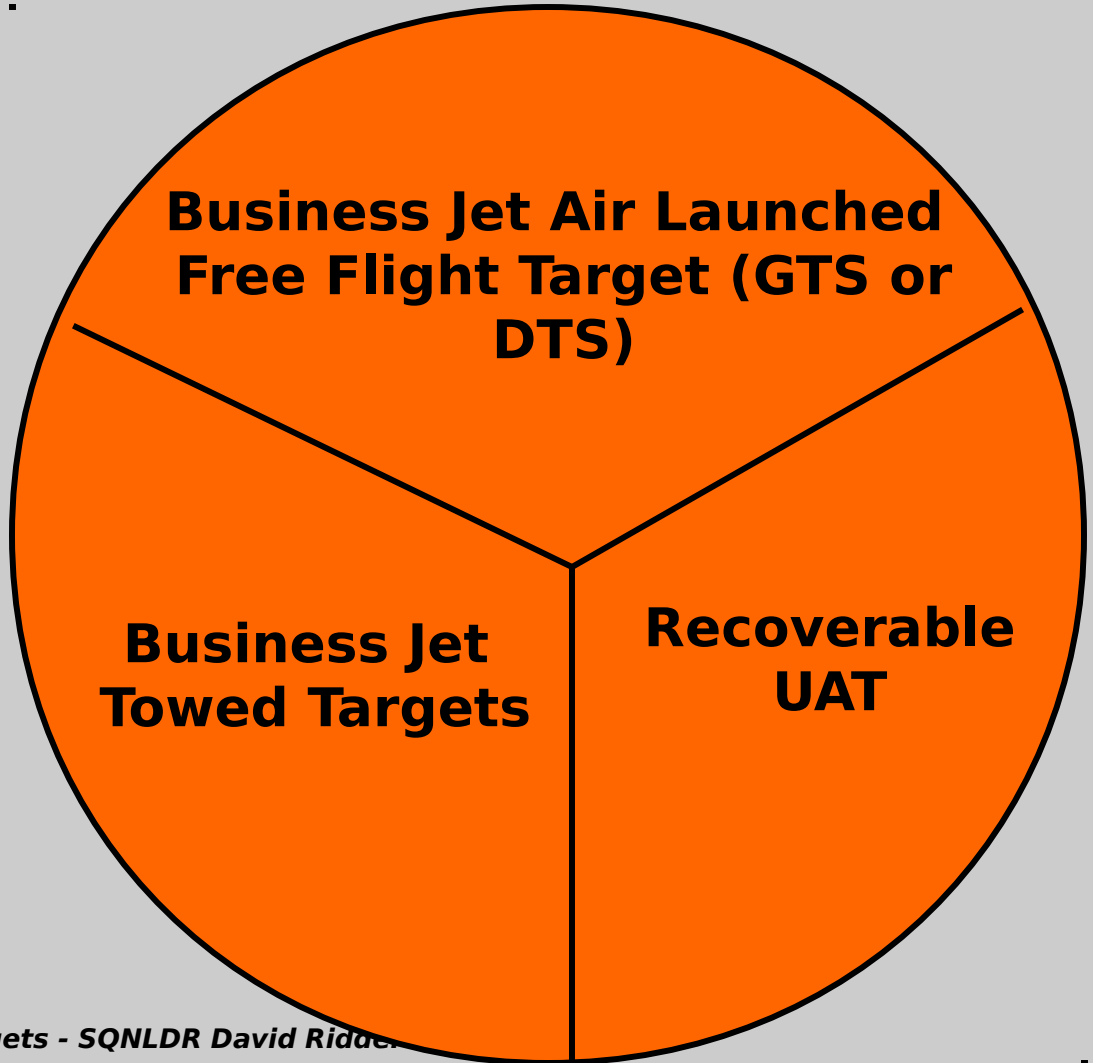
- Navy
  - Evolved Sea Sparrow Missile
  - SM-2
  - Guns, Phalanx and future VSRAD
- Army
  - RBS-70
- Air Force
  - AMRAAM
  - ASRAAM / AIM-9
  - Guns

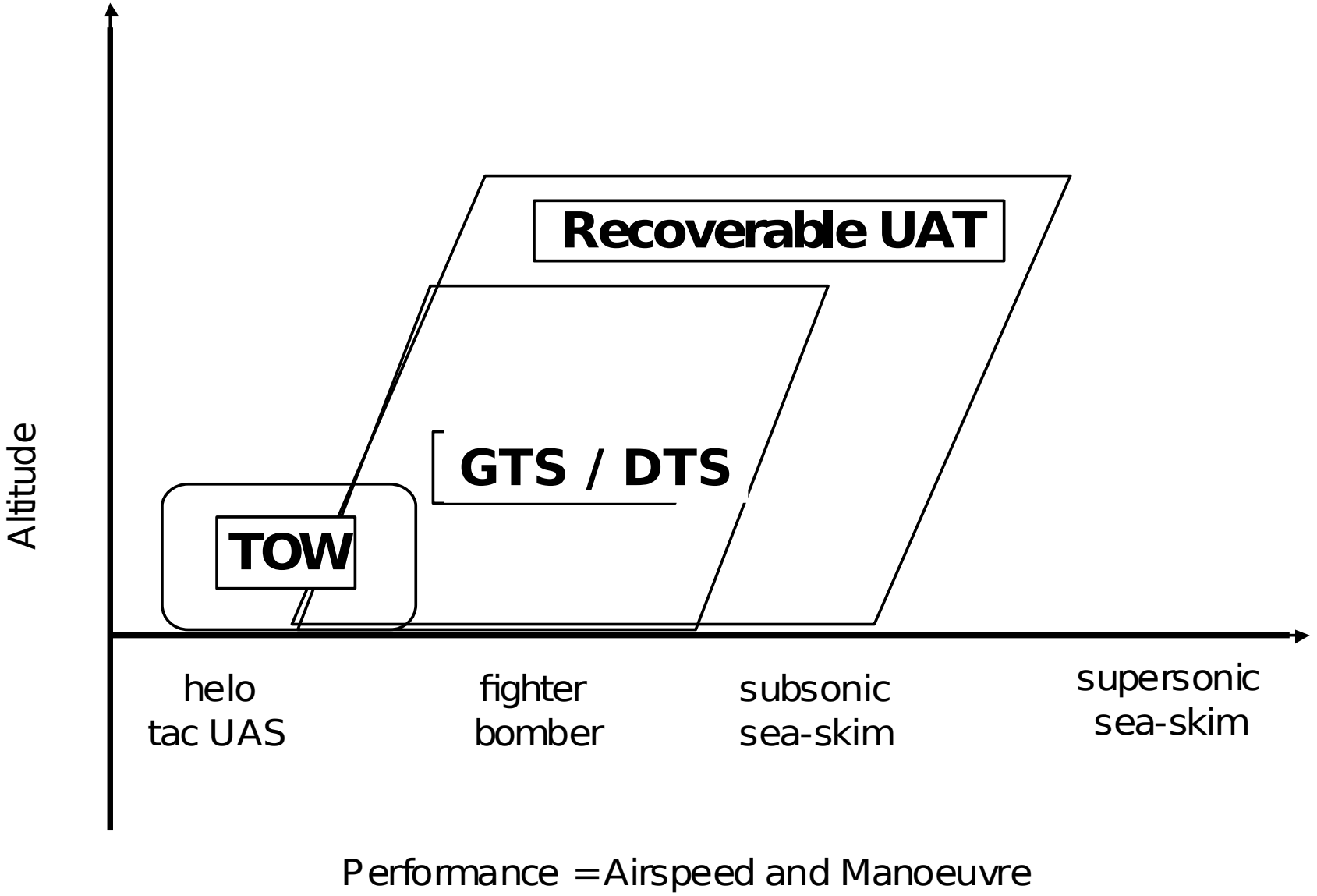
Extant Aerial Targets



JP66 - Solution

- System of systems




Recoverable UAT
GTS / DTS
TOW
Altitude
helo
tac UAS
fighter
bomber
subsonic
sea-skim
supersonic
sea-skim
Performance =Airspeed and Manoeuvre

Business Jet Services

- Target Tow
  - 30 000ft cable
  - Existing Tows
- Air Launched Free Flight Target
  - Glide Target Systems - tow cable released
  - Decoy Target Systems - pylon released
  - Safety Case - termination systems
  - Augmentation

Recoverable UAT Requirements

- deployable
- over land and over sea operations
- ‘High Seas’ ~ 80 nm from coast
- high subsonic sea skim (essential)
- high subsonic medium alt (essential)
- supersonic sea skim (desirable)
- 45 mins ‘on task’ (threshold), 60 mins (target)
- augmentation - RDR + IR
- vector MDI
- multiple simultaneous UAT ops

Recoverable UAT Limitations

- Technical and Operational Air Worthiness
- Particular Frequency Spectrum
- ADO manpower ~5 persons
  - contractor managed, operated and maintained
- No firings off the deck of RAN warships
  - leased trawler for an at sea firing platform (if req)
- No recoveries using RAN helos or ships
  - leased UAT recovery vessel

JP66 Endorsed Options

Option 1a: Business Jet Services + Kalkara LOTE

Option 1b: Business Jet Services + Kalkara LOTE + New UAT Supplantation

Option 1c: Business Jet Services + New UAT

Option 1d: Business Jet Services + Turnkey UAT Service

Conclusion

- JP66 Phase 1 appears in the DCP
- User Requirements and Market Survey
- Initial Business Cases being reviewed
- First Pass Committees Apr 06 - Jun 06
- Solicitation Documents late 2006

Outside JP66 Scope

- Aerial Targets to qualify ANZAC warship radar upgrade prior to JP66.
  - Turnkey service provision
  - Multi axis presentation
  - High subsonic sea skim (essential)
  - Supersonic sea skim (important)

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Links

- Defence Capability Plan (DCP)
  - http://www.defence.gov.au/dmo/id/dcp/dcp.cfm